

CLAIMS:

1. A housing member for housing an elongate material, the housing member characterized by comprising:

a base, said base having an opening extending along a longitudinal direction of the housing member and a plurality of convex portions arranged at predetermined pitches along said longitudinal direction, each of the convex portions extending along a circumferential direction of said base; and

a cover for covering the opening of said base, said cover comprising a plurality of convex portions arranged at predetermined pitches along said longitudinal direction, each of the convex portions of the cover extending along a circumferential direction of the cover, the arranged pitch of the convex portions of said base and the arranged pitch of the convex portions of said cover being the same or having a relationship of an integral multiple, and wherein, when said cover is assembled to said base, the convex portions of said cover and the convex portions of said base are fitted to each other so as to be overlaid on each other.

2. The housing member according to claim 1, characterized in that said cover is fitted onto an outer side of said base.
3. The housing member according to claim 1 or 2, characterized in that fitted portions are provided at both ends of each of the convex portions of said base, fitting portions are provided at both ends of each of the convex portions of said cover, and each of the fitting portions of said cover is fitted on the corresponding fitted portion of said base.

4. The housing member according to claim 3, characterized in that a locking projection is provided at an inner side of said each of the fitting portions, and a locked projection capable of being locked at the locking projection of the corresponding fitting portion is provided at an outer side of said each of the fitted portions.

5. The housing member according to claim 4, characterized in that an abutting step portion is formed at a border portion of said each of the fitted portions and the convex portion continuing to said each of the fitted portions, and when said cover covers said base, an end surface of said each of the fitting portions abuts the corresponding abutting step
5 portion.

6. The housing member according to claim 5, characterized in that a cross-sectional shape of said each of the fitted portions is smaller than a cross-sectional shape of the corresponding convex portion.

7. The housing member according to any one of claims 1 to 6, characterized in that an approximately U-shaped reinforcement tool is disposed in at least one of an inner concave portion which is formed inside each of the convex portions of said base and an outer concave portion which is formed between a pair of adjacent convex portions of
5 said cover.

8. The housing member according to claim 7, characterized in that said reinforcement tools are placed respectively in both of each of the inner concave portions of said base and each of the outer concave portions of said cover.

9. The housing member according to any one of claims 1 to 8, characterized in that the convex portions of said cover and the convex portions of said base are fitted to each other so as to prevent said cover from being displaced along the longitudinal direction of the housing member with respect to said base.
10. The housing member according to claim 1 or 2, characterized in that in a portion at which the convex portion of said cover and the convex portion of said base are overlaid on each other, restraining means which restrains said cover from being detached from said base is provided between the convex portion of said cover and convex portion of
5 said base.
11. The housing member according to claim 10, characterized in that said cover and said base each comprise a pair of side walls opposed to each other along the longitudinal direction of the cover and the base, and said restraining means includes a bulged base portion which is formed by bulging the side wall of said base outward, and a bulged
5 cover portion which is formed by bulging the side wall of said cover outward to be capable of being fitted on the bulged base portion.
12. The housing member according to any one of claims 1 to 11, characterized in that said elongate material is a cable which is laid inside a building.

13. The housing member according to any one of claims 1 to 11, characterized in that said elongate material is a fluid pipe which is laid indoors or outdoors and allows a flow of a fluid.
14. The housing member according to any one of claims 1 to claim 13, characterized in that said base is fixed to a structure constructed in a building.

15. A housing member for housing an elongate material, characterized in that said housing member is formed by dividing a cylindrical molded product made of a resin, which has annular convex portions arranged at predetermined pitches along a longitudinal direction of the housing member, into a base and a cover along said longitudinal direction, the base and the cover each have semi-annular convex portions arranged at said pitches along the longitudinal direction of the housing member, the cover is assembled to the base to cover an opening of the base, and when the cover is assembled to the base, the convex portions of the cover and the convex portions of the base are fitted to each other so as to be overlaid on each other.

16. A manufacturing method of the housing member according to any one of claims 1 to 14, the method is characterized by including:

the step of preparing a cylindrical intermediate molded product made of resin which is formed by integrally molding said base and said cover with a portion to be cut off therebetween; and

the step of dividing said intermediate molded product along its longitudinal direction by cutting said portion to be cut off and obtaining said base and said cover which are separated from each other.

17. The manufacturing method according to claim 16, characterized in that said portion to be cut off of said intermediate molded product has a convex portion which is connected to the convex portions of said base and cover and has a smaller cross-sectional shape than cross-sectional shapes of the convex portions.

18. A connecting device comprising housing members for housing an elongate material and a connecting tool for connecting said housing members, characterized in that the housing member has a base and a cover which are assembled to each other, the base and the cover each have convex portions arranged at predetermined pitches along a longitudinal direction of the housing member, said connecting tool forms an approximately cylindrical shape, connecting ports are provided at both ends in an axial direction of the connecting tool, one end of said housing member is connected to each of the connecting ports, and the connecting tool has a connecting base body and a connecting cover body which are separable to divide said connecting port into two and capable of being assembled to each other; and

displacement preventing means, which connects both the base and the connecting base body by vertically overlaying the base and the connecting base body on each another, and prevents the base and the connecting base body connected to each other from being displaced vertically, is provided between said base and connecting base body.

19. A connecting tool for connecting housing members for housing an elongate material, characterized in that the housing member has a base and a cover which are assembled to each other, the base and the cover each have convex portions arranged at predetermined pitches along a longitudinal direction of the housing member, said connecting tool forms an approximately cylindrical shape, connecting ports are provided at both ends in an axial direction of the connecting tool, one end of said housing member is connected to each of the connecting ports, and the connecting tool has a connecting base body and a connecting cover body which are separable to divide said connecting port into two and capable of being assembled to each other; and

said connecting base body comprises displacement preventing means which connects both the base and the connecting base body by overlaying the base on the connecting base body, and prevents the base and the connecting base body as connected to each other from being displaced vertically.

20. The connecting tool according to claim 19, characterized in that said displacement preventing means includes a convex line provided at an inner surface of said connecting base body to extend along an axis line of the connecting base body so as to engage with a step portion provided at an outer surface in the vicinity of an opening of said base.

21. The connecting tool according to claim 20, characterized in that in sectional view along a surface perpendicular to the axis line of said connecting base body, said connecting base body forms an approximately U-shape, and has said convex lines at both end portions thereof.

22. The connecting tool according to any one of claims 19 to 21, characterized in that a locking convex line which is locked at the convex portion of said housing member is provided on the inner surface of said connecting base body to extend in the direction perpendicular to the axis line of the connecting base body.
23. The connecting tool according to any one of claims 19 to 21, characterized in that said connecting base body and connecting cover body are connected by a hinge to be relatively rotatable.
24. A placement structure for a cylindrical housing member having flexibility for housing an elongate material, characterized in that said housing member has annular convex portions arranged at predetermined pitches along a longitudinal direction of the housing member, said placement structure comprises racks and rail bodies laid on said racks, and
5 said housing member is fixed to the rail body to extend along said rail body.
25. The placement structure according to claim 24, characterized by further comprising a fixing tool for fixing said housing member to said rail body.
26. The placement structure according to claim 24 or 25, characterized in that said housing member comprises a vertically separable base and cover, and said base is fixed on said rail body.

27. The placement structure according to any one of claims 24 to 26, characterized by further comprising a connecting tool for connecting both the adjacent rail bodies, and characterized in that the connecting tool is fixed to said rack.

28. A fixing tool for fixing a housing member, which has flexibility and includes a space for housing an elongate material inside, to a rail body laid on a rack, the fixing tool is characterized by having:

a held portion which is held at said rail body; and

5 a fixing portion facing an upper surface of the rail body to be able to fix said housing member to said rail body in a state in which said held portion is held at said rail body.

29. A fixing tool for fixing a housing member for housing an elongate material at a placement section, said housing member having a base and a cover which are assembled to each other, and the base and the cover respectively having convex portions arranged at predetermined pitches along a longitudinal direction of the housing member, said
5 fixing tool is characterized by having:

a body portion fitted into a concave portion provided between both adjacent convex portions of said base;

a locking portion locked at a portion of said base, which does not interfere with mounting and dismounting of said cover to and from the base on an occasion of
10 mounting and dismounting of said cover to and from the base to prevent said base from rising with respect to said placement section; and

a fixing portion fixed to said placement section.

30. The fixing tool according to claim 29, characterized in that said body portion comprises:

fitting portions respectively fitted into a plurality of concave portions of said
base; and

an insertion hole in which at least one of the convex portions of said base is
5 able to be inserted.

31. The fixing tool according to claim 29 or 30, characterized in that said locking portion is
locked at a portion in said base, which is covered with said cover.

32. The fixing tool according to claim 31, characterized in that said locking portion is
locked at said base so as to cover end edge portions at both sides of said base.